WHAT IS CLAIMED IS:

1. An image sensor module comprising :

a substrate having plurality of lead frames arranged in a matrix, each of the lead frames having a first board and a second board located on a height different from that of the first board, the substrate forming with an upper surface, which is formed with a opening, and a lower surface, which is formed with a cavity penetrated from the opening , each of the first board of the lead frames exposed from the cavity, and each of the second board of the lead frames exposed from the lower surface of the substrate ;

a frame layer integrally formed with the substrate, and arranged at the periphery of the upper surface of the substrate to define a chamber together with the substrate, an internal thread being formed on the inner wall of the chamber.

a photosensitive chip mounted within the cavity of the substrate, and electrically coupled each of the first boards of the lead frames in a flip chip manner ;

a transparent layer covered onto the upper surface of the substrate to cover the opening, therefore, the photosensitive chip may received optical signals passing through the transparent layer ; and

a lens barrel having a top surface, a bottom surface opposed to the top surface and a transparent region, a external thread formed between the top surface and the bottom surface, the lens barrel being arranged within the chamber of the

frame layer, the external thread being screwed on the internal thread of the chamber.

2. The image sensor module according to claim 1, wherein a through hole communication with the transparent region is formed at the upper end face of the lens barrel, and an aspheric lens and an infrared filter under the aspheric lens is arranged within the transparent region of the lens barrel.

3. The image sensor module according to claim 1, wherein the transparent layer is a piece of glass.

4. The image sensor module according to claim 1, further comprises a molded resin, which is filled within the cavity of the substrate to protect the photosensitive chip.